



GPS AND GALILEO... PROGRESS THROUGH PARTNERSHIP

The United States and the European Union and its member states have been close partners in the area of space-based positioning, navigation and timing (PNT) since 2004, when the two parties signed a historic agreement establishing cooperation related to the U.S. Global Positioning System (GPS) and Europe's planned Galileo program.

Our cooperation aims to ensure that GPS and Galileo will be interoperable at the user level for the benefit of civil users around the world. The cooperation is also intended to maintain a level playing field in the global market for goods and services related to space-based PNT.

The United States and the European Union are engaged in significant technical collaboration to ensure that GPS and Galileo are compatible from radio frequency, non-interference and national security perspectives.

The United States and the European Union are designing GPS and Galileo to transmit one or more common civil signals, so future users will enjoy the benefits of multiple PNT satellite constellations. Benefits include increased satellite availability (particularly in urban environments) and improved resistance to signal interference. Signals will be provided on two common frequencies by the United States and the European Union without direct user fees.

The increased number of civil navigation signals available for space-based PNT will enhance not only the service robustness and availability, but will also potentially improve the service accuracy for mass-market users. Indeed, the

probability of favorable satellite geometries is expected to improve as a result of the combination of both systems. Moreover, new safety of life applications will be enabled by the combined processing of GPS and Galileo signals. With a dual constellation, the computation of receiver autonomous integrity monitoring (RAIM) can be improved. As soon as the number of operational Galileo satellites becomes significant, the availability of RAIM will be boosted, thus enabling the ability of self-detection and isolation of faulty signals at any time and any place.

The European Union and the United States are also cooperating to ensure that manufacturers around the world can build dual system civil receivers, capable of using GPS and Galileo. The parties understand that robust, market-based competition within the private sector has been the key to the current success of global satellite navigation system technology. The United States and the European Union are cooperating at the government level to promote continued competition among commercial companies.

Galileo is a global satellite positioning and navigation system designed and controlled by the European Union. It will provide four different worldwide navigation services (Open Service, Safety of Life Service, Commercial Service and Public Regulated Service) and one extra service to support the Search and Rescue Operations independently from other systems. The core component of Galileo will be a global constellation of thirty satellites distributed over three planes in Medium Earth Orbit (MEO).

The Global Positioning System is a constellation of more than 24 U.S. government satellites, providing PNT services to civilian and military users on a continuous basis, free of direct user charges. The system provides accurate, reliable location and time information to anyone equipped with a GPS receiver. The outstanding and ever increasing accurate performance of GPS has earned it the confidence of millions of worldwide civil and military users. Since it was declared operational in 1995, GPS has provided uninterrupted global service. The United States is committed to continuously upgrading the system to provide enhanced performance for the end user.

The United States and the European Union attach great importance to the planned complementary and interoperable nature of Galileo and GPS. This cooperative partnership will result in improved efficiency, safety, and performance for PNT users around the world. Both partners are committed to working together now and in the future to encourage all space-based PNT system providers to adopt the same common, civil signals as GPS and Galileo to enhance worldwide user compatibility and interoperability.

For more information about GPS, visit: <http://www.gps.gov>

For more information about Galileo, visit:
http://ec.europa.eu/dgs/energy_transport/Galileo/index_en.htm